

IN THE CLAIMS

1 - 10 (canceled)

11. (Currently amended) A multiprocessing system for an automobile, comprising:

multiple on-board processors that run different automobile applications; multiple links that couple the multiple processors together; and a dynamic configuration system operating in at least some independently on multiple different ones of the on-board multiple processors that each automatically incorporates new hardware devices into the multiprocessing system for direct communication with one or more of the multiple on-board processors and automatically reconfigures the multiprocessor system in real-time to run at least some of the automobile applications normally run on primary on-board processors on different auxiliary on-board processors in the multiprocessing system by replacing the execution of the automobile applications normally run by the auxiliary on-board processors with the execution of the automobile applications normally run by the primary on-board processors.

12. (Currently amended) A multiprocessing system according to claim 11 wherein the dynamic configuration system includes a device manager that detects multiple separate device managers operating independently on different on-board processors and each separately detecting signals generated by new devices and incorporates incorporating the new devices into the multiprocessor system when the signals conform with a protocol used between the multiple processors.

13. (Currently amended) A multiprocessing system according to claim 11 wherein the dynamic configuration system includes a configuration manager that tracks multiple different configuration managers operating independently on the different automobile applications operating in the different on-board processors and automatically identifying high priority automobile applications that have failed on a primary on-board processor and identifying lower priority automobile applications operating on auxiliary on-board processors, the configuration managers reconfiguring reconfigures the multiprocessing system to run the failed high priority applications on different ones of the identified auxiliary on-board multiple processors.

14. (Currently amended) A multiprocessing system according to claim 13 including storing a copy of the application that has failed on one of the on-board processors that is currently running other automobile applications, and downloading the application to one of the auxiliary on-board processors identified as operating one of the lower priority automobile applications and running the stored downloaded copy of the automobile application to another on the auxiliary on-board processor when the failure is detected.

15. (Currently amended) A multiprocessing system according to claim 14 including storing critical data generated by the failed application running on the primary on-board processor and downloading and running the stored critical data along with the copy of the application on another the auxiliary on-board processor.

16. (Currently amended) A multiprocessing system according to claim 13 including displaying applications that have failed and then displaying applications in

the other on-board processors that can be replaced with copies of the failed applications.

17. (Original) An automobile processing system according to claim 16 including identifying types of data transferred by different devices in the multiprocessing system and displaying the different devices in the multiprocessing system that can output the identified types of data.

18. (Original) An automobile processing system according to claim 16 including performing the following applications with the multiprocessor system:

automatic brake control;
audio player control;
video player control;
airbag deployment monitoring;
display control;
navigation control; and
sensor monitoring.

19 - 28 (canceled)

29. (Currently amended) A multiprocessor system used in a car, comprising:
multiple processors located on-board the car and adapted to run different real-time car applications ;
different communication links coupling the multiple processors together; and
a dynamic configuration system run independently on multiple different ones of the multiple on-board processors that includes a device manager for automatically detecting and adding new hardware devices to the on-board multiprocessor system, a configuration manager that automatically reconfigures the multiprocessor system to run the real-time car applications on different ones of the multiple on-board processors, and a data manager that identifies data generated by the new devices and identifies other devices in the multiprocessor system that can input or output the identified data.

30. (Original) A multiprocessor system according to claim 29 wherein the real-time car applications include any of the following:

- car braking;
- audio control;
- video control;
- car sensor monitoring;
- car display control;
- car security monitoring;
- car temperature control;
- car lighting control; and
- car airbag monitoring.

31. (Original) A multiprocessor system according to claim 29 wherein the different communication links include a IEEE 802.11 link, a blue tooth link, and a packet based hardwired link, a satcom link, and a cellular link.

32. (Currently amended) A multiprocessor system according to claim 29 including memory located on-board the car for storing:

a list of the applications running in the multiprocessor system;
backup copies of selected applications running on the multiple processors; and
data generated by some of the applications,
the configuration system operated by one of the on-board processors
identifying a high priority one of the applications that has failed on one of the on-board processors and then accessing the list to identify an auxiliary on-board processor running a lower priority one of the applications, the configuration system operated by the on-board processor then loading the backup copy of the identified failed high priority application to the identified auxiliary on-board processor.

33. (New) A system for operating a mobile vehicle, comprising:
multiple on-board devices that run vehicle system applications;
a communication system linking the multiple on-board devices; and
a configuration system independently operating on multiple different on-board devices that identifies which of the on-board devices and applications share a compatible communication protocol, the configuration system further associating and co-processing different applications with different combinations of on-board devices that are identified as having compatible communication protocols.

34. (New) The system according to claim 33 wherein the configuration system operated by one of the on-board devices identifies the on-board devices that have sufficient processing capability to process a same one of the identified applications and automatically reconfigures one of the identified on-board devices to run the identified application when another one of the on-board devices currently running the identified operation fails.

35. (New) The system according to claim 33 including a graphical user display that lists on-board devices and associated compatible applications, wherein an operator instructs the configuration system to make the associations.

36. (New) The system according to claim 33 wherein data is transmitted over the communication system as an output of one of the on-board devices and an input of another of the on-board devices.

37. (New) The system according to claim 33 wherein one or more portable devices are physically transported into the mobile vehicle and the configuration system operated by one of more of the on-board devices automatically identifies movement of the one or more portable devices within the vicinity of the mobile vehicle, the configuration system determining if the one or more portable devices have authorization to be integrated with the on-board device and when authorized automatically integrating the one or more portable devices with the on-board devices to operate as an integrated on-board network where data and communications are transported between the on-board devices and the one or more portable devices.

38. (New) The system according to claim 37 wherein the one or more portable devices include an audio or visual interface.

39. (New) The system according to claim 38 wherein output data from the one or more portable devices is received as input data by one or more of the other on-board devices.

40. (New) The system according to claim 39 wherein the other on-board devices transform the input data from the one or more portable devices into sound or images.

41. (New) The system according to claim 33 wherein the communication system transmits wireless data between one or more of the on-board devices and an external device located outside of the vehicle.

42. (New) The system according to claim 41 wherein one of the on-board devices includes a graphical user interface that displays a menu of selections according to data received from the external device, and the communication system transmits a selection from the menu to the external device.

43. (New) The system according to claim 42 wherein the external device is operated by a drive-through business establishment.